

BINARY HYSTERESIS COMPARATOR CIRCUITS AND METHODS

ABSTRACT

Binary hysteresis comparator circuits, methods, and applications. A binary constant defines a window within which a binary input can change its value without triggering the comparator circuit output signal. An exemplary binary hysteresis comparator circuit includes a comparator circuit, an adder circuit, and a multiplexer circuit. The comparator circuit compares two multi-bit input values. A first comparator input is provided by the multiplexer circuit, which selects either a first value or a second value, depending on the comparator output signal. The first and second values differ by the binary constant, which is added to or subtracted from a multi-bit circuit input value by the adder circuit. An increase (or decrease) of less than the binary constant is ignored. Some embodiments include an optional overflow prevention circuit that prevents the selected value from exceeding predetermined parameters.